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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,249	09/25/2006	Hajime Saito	0033-1107PUS1	7406
2292 7590 06/25/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER GREEN, TRACIE Y	
			ART UNIT 2879	PAPER NUMBER
			NOTIFICATION DATE 06/25/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/594,249	Applicant(s) SAITO ET AL.	
	Examiner Tracie Green	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-6, and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/17/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/20/2009 has been entered.

Response to Amendment

2. Receipt is acknowledged of applicant's amendment filed 03/20/2009. Claims 1-3, 5-6 and 8-10 are pending and an action on the merits is as follows.
3. Applicant's amendments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 6, 8 and 10 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cheetham et al. (US 2005/0077499 A1).

Regarding claim 1, Cheetham et al. (Cheetham, hereafter) teaches (Figures 5-7) a light-emitting device comprising: a semiconductor excitation light source emitting blue-violet light (paragraph 15, lines 1-4), and a solid material illuminant having an absorbent for said blue-violet light containing Sm of 0.01 to 10 mol% (Paragraph 33, lines 8-14) *wherein said solid material illuminant radiates light by inner shell transition of Sm by blue-violet light absorption (Examiner note: this portion is drawn to a method of operating and does not provide any structural limitations beyond which is already claimed, thus it will not be afforded patentable weight .said solid material illuminant contains Sc, Y or a typical element as cations (Paragraph (Table 1, rows 1-8) (Examiner note: table discloses Y), and contains at least one of N and S as anions (Table 1, row or Paragraph 19, lines 5-7) (Examiner note in the stable the red phosphor contains S and in the paragraph, it discloses that the green phosphor to be combined with the red and blue to be ZnS, thus satisfying this limitation).*

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Regarding claims 2, Cheetham teaches wherein said blue-violet light has a peak wavelength in the range of 398 to 412 nm (Paragraph 6, lines 4-5).

Regarding claims 3, Cheetham teaches, wherein said semiconductor excitation light source emitting blue-violet light (Paragraph 2, lines 4-7) is a semiconductor laser device having an active layer of an InGaN semiconductor (Paragraph 2, lines 4-7) *(examiner note: prior art reference this in the background and discloses GaN based dies to be used, even though he does not explicitly disclose it by way of example, examiner believe prior to both anticipates and renders this limitation obvious)*

Regarding claim 8, Cheetham teaches wherein said solid material illuminant contains a red phosphor having a peak wavelength in the range of 600 to 670 nm (Paragraph 20, line 5) *(examiner note: prior art reveals 580 to 700 for red)*, a green phosphor having a peak wavelength in the range of 500 to 550 nm (Paragraph 20, line 4) *(examiner note: prior art reveals 500-580 for green)* and a blue phosphor having a peak wavelength in the range of 450 to 480 nm (Paragraph 20, line 5) *(examiner note: prior art reveals 400 to 500 for blue)*

Regarding claim 10, Cheetham teaches wherein said red phosphor contains at least either Sm or Eu (Table 1 or Table 2).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheetham et al. (US 2005/0077499 A1) in view of Mueller-Mach et al. (US 2004/0256974 A1).

Cheetham teaches the light-emitting device set forth above (see rejection claim 1). Cheetham is silent regarding teaches wherein said solid material illuminant contains N anions (claim 5) wherein at least one of nitrides of Ga, In and Al (claim 6)

In the same field of endeavor of light-emitting devices, Mueller-Mach et al. teaches wherein said solid material illuminant contains N anions (Paragraph 31, line 6) that is at least one of nitrides of Ga, In and Al (Paragraph 31, lines 6) in order to generate light, especially white light, with greater efficiency and improved color rendering for an overall improved image (Paragraph 4, lines 6-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify light-emitting device of Cheetham wherein said solid material illuminant contains at least one of nitrides of Ga, In and Al in order to generate light, especially white light, with greater efficiency and improved color rendering for an overall improved image as taught by Mueller-Mach et al.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheetham et al. (US 2005/0077499 A1) in view of Juestel et al. (US Patent 6,084,250).

Cheetham teaches the light-emitting device set forth above (see rejection claim 1). Cheetham teaches wherein both red and blue contain a rare earth element, but is silent concerning all the phosphors, red green and blue have rare earth elements.

In the same field of endeavor of light-emitting devices, Juestel teaches wherein said red phosphor, said green phosphor and said blue phosphor contain rare earth elements (Column 4, table 1) in order to provide a device with high color rendering to display light efficient and intense image (Column 1, lines 54-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify light-emitting device of Cheetham wherein green, red and blue phosphors each contain a rare earth element, but is silent concerning all the phosphors, red green and blue have rare earth elements in order to provide a device with high color rendering to display light efficient and intense image as taught by Juestel et al.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracie Green whose telephone number is (571)270-3104. The examiner can normally be reached on Mon-Thurs 7:00am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Tracie Green/
Examiner, Art Unit 2879

/Sikha Roy/
Primary Examiner, Art Unit 2879